

Welcome to Honors Geometry!

I am looking forward to next year's geometry class and I hope that you are as well.

Before you leave for the summer, you must join our class on Edmodo.

- If you do **not** have an account:
 - Go to www.edmodo.com
 - Join! IT'S FREE!!!
 - Enter our class code: **0xqigt**
- If you have an account simply log on and join a class: **0xqigt**
- **IF YOU HAVE A SMART PHONE, I URGE YOU TO DOWNLOAD THE APP FOR EDMODO!!!!** The app makes it easy to communicate with me and your classmates and also see your assignments.

In order to start off on the right foot next year you are going to need to keep up on some of your Algebra and familiar Geometry skills. This is a fairly large packet so I warn you do not wait until the last week of summer to start working on it. If at ANY TIME you are working and you have a question email me at coswald@lindenwold.k12.nj.us , or just send me a message on Edmodo.

Some tips for this packet:

- Work in groups. This means as a group! Please don't split up the work this can only hurt you.
- Work in groups. It is a good idea to get to know your classmates, if you don't already. There will be several opportunities to work together in this class as well as take home tests and quizzes.
- Work in groups, in our case work as a class. Learn from each other.
- Email me if you get stuck or send a message on Edmodo!
- Make a formula sheet / rule sheet. On it should be domain, range, parent functions, y intercept formula, factoring quadratics, graphing inequalities, exponent rules, quadratic formula, and fraction rules.

This packet is due on the **SECOND** day of school, and the packet is worth a test grade. I am grading for **correctness** not completion, so take this seriously. Each day the packet is late, 10 points will be taken off of your earned grade. Put only answers on this packet, if you want to show your work do it separately and label it. Please, please, please do **NOT** hand in a crumpled up, written all over, erased, erased again, crossed out, messy, out of order, ripped, stained packet. I will also post the packet on Edmodo and on my website. Edmodo will allow you to talk to your other classmates and myself very easily!

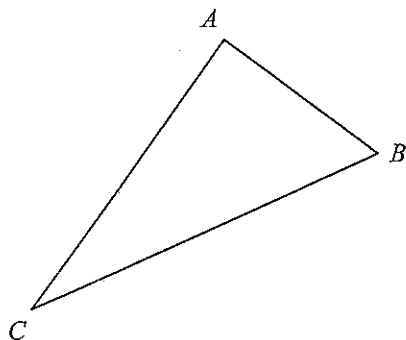
Good luck,

Ms. Oswald

Name: _____ DUE DATE: _____

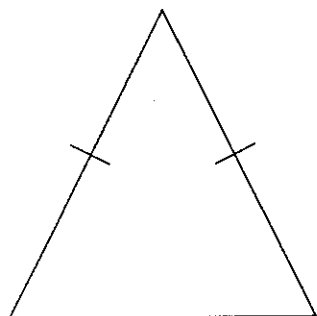
Honors Geometry - Summer Packet

- ____ 1. (1 point) Measure each angle of $\triangle ABC$ to the nearest degree.



- A. $m\angle A = 90$, $m\angle B = 60$, and $m\angle C = 30$ C. $m\angle A = 80$, $m\angle B = 70$, and $m\angle C = 150$
B. $m\angle A = 60$, $m\angle B = 90$, and $m\angle C = 30$ D. $m\angle A = 90$, $m\angle B = 60$, and $m\angle C = 150$

- ____ 2. (1 point) Classify the triangle by its sides and angles.

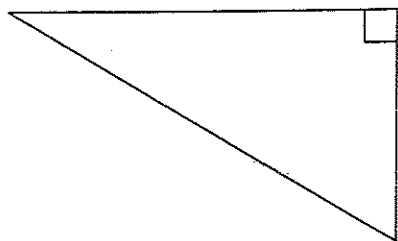


- A. right isosceles C. acute scalene
B. obtuse scalene D. acute isosceles

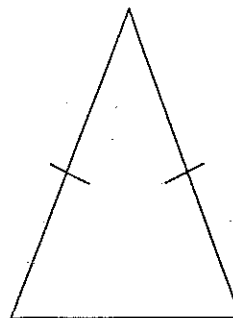
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ID: A

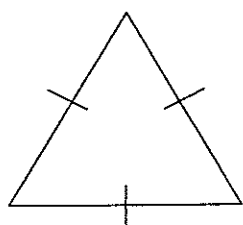
____ 3. (1 point) Which of the following is a right scalene triangle?



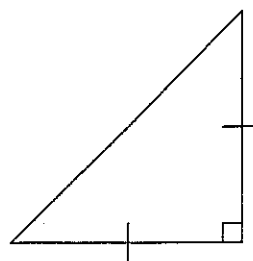
A.



C.



B.

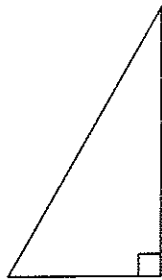


D.

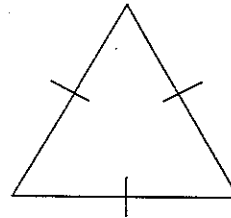
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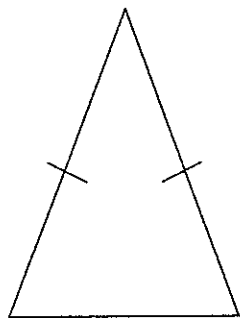
____ 4. (1 point) Which of the following is an obtuse isosceles triangle?



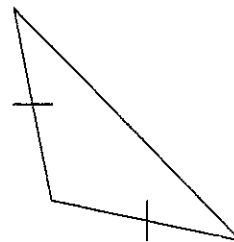
A.



C.



B.



D.

Solve. Round to the nearest tenth if necessary.

____ 5. (1 point) $8^2 + c^2 = 9^2$

A. ± 2.6

B. ± 1

C. ± 4.1

D. ± 17

____ 6. (1 point) $x^2 = 50$

A. ± 3.1

B. ± 25

C. ± 7.1

D. ± 16

Name: _____

ID: A

Evaluate the expression for $x = 2$ and $y = -4$.

_____ 7. (1 point) $\frac{x^2 - 2y}{x - 2y + 1}$

A. $-\frac{2}{5}$

B. $\frac{10}{11}$

C. $\frac{12}{13}$

D. $\frac{12}{11}$

Simplify the expression.

8. (1 point) $(4m + 3)^2$

9. (1 point) $-2x + x + 7 - 8$

_____ 10. (1 point) $(2x + 7)(5x - 4)$

A. $10x^2 + 27x - 28$

C. $10x^2 + 43x + 28$

B. $10x^2 - 27x - 28$

D. $10x^2 - 43x + 28$

Express each ratio in simplest form.

11. (1 point) $\frac{12w^4}{32w}$

Name: _____

ID: A

_____ 12. (1 point) $\frac{a+b}{7a+7b}$

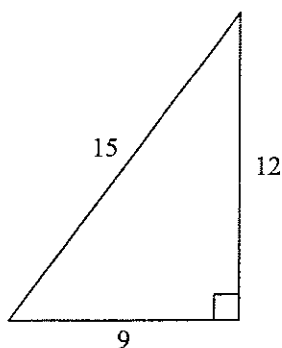
A. $\frac{1}{6a+6b}$

B. $\frac{1}{a+b}$

C. $\frac{1}{14}$

D. $\frac{1}{7}$

_____ 13. (1 point) shorter leg : hypotenuse



Drawing not to scale

A. $1\frac{1}{4}$

B. $\frac{3}{4}$

C. $\frac{3}{5}$

D. $1\frac{2}{3}$

Simplify each expression.

14. (1 point) $-3|-2+10|$

Solve the equation.

_____ 15. (1 point) $|x| - 8 = -3$

A. ± 11

B. -5

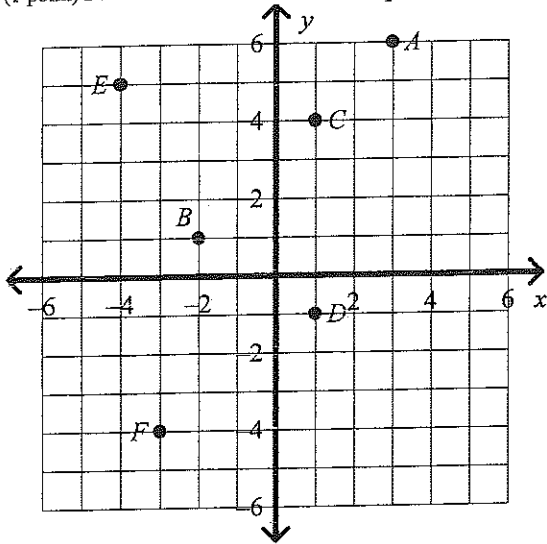
C. 5

D. ± 5

Name: _____

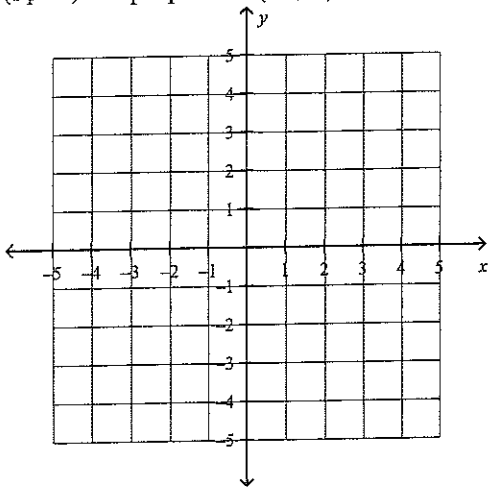
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- ____ 16. (1 point) Name the coordinates of point C .



- A. $(1, 4)$ B. $(-1, 4)$ C. $(4, 1)$ D. $(1, -4)$

17. (1 point) Graph point $A(-4, 1)$.



Name: _____

ID: A

18. (1 point) In which quadrant or on which axis would you find the point $A(-7, 9)$?

19. (1 point) In which quadrant or on which axis would you find the point $B(2, -8)$?

20. (1 point) In which quadrant or on which axis would you find the point $B(10, 0)$?

Solve the equation.

21. (1 point) $6(y + 7) = 60$

22. (1 point) $\frac{4p}{5} + 24 = 36$

23. (1 point) $1c = -16$

Name: _____

ID: A

24. (1 point) $4(q + 12) = -4q$

25. (1 point) Twice a number plus 28 is 40. What is the number?

26. (1 point) The average high temperature over a five day period was 72°F . The temperatures for four of the days were 63°F , 85°F , 67°F , and 72°F . What was the high temperature on the fifth day?

27. (1 point) A customer went to a garden shop and bought some potting soil for \$15.00 and 5 shrubs. The total bill was \$57.50. Write and solve an equation to find the price of each shrub.

Write the percent as a decimal.

28. (1 point) 68.9%

29. (1 point) 17%

Name: _____

ID: A

Simplify.

30. (1 point) 30% of 200

31. (1 point) 84% of 262

The letters S, E, L, E, C, T, E, D are written on pieces of paper and placed in a hat. You draw one letter at random. Find the probability of each outcome.

_____ 32. (1 point) $P(\text{vowel})$

A. $\frac{3}{8}$

B. $\frac{3}{5}$

C. $\frac{5}{8}$

D. $\frac{1}{2}$

_____ 33. (1 point) $P(E)$

A. $\frac{5}{8}$

B. $\frac{3}{8}$

C. $\frac{1}{4}$

D. $\frac{5}{7}$

_____ 34. (1 point) $P(R)$

A. $\frac{1}{7}$

B. 1

C. 0

D. $\frac{1}{8}$

_____ 35. (1 point) A coin is tossed five times. What is the probability of getting tails five times in a row?

A. $\frac{1}{64}$

B. $\frac{5}{2}$

C. $\frac{1}{32}$

D. $\frac{1}{10}$

A bowl contains 4 yellow marbles, 5 red marbles, 1 blue marble, and 3 green marbles. Find the probability of the given outcome.

_____ 36. (1 point) $P(\text{yellow})$

- A. $\frac{4}{13}$ B. $\frac{4}{9}$ C. $\frac{9}{13}$ D. $\frac{1}{9}$

_____ 37. (1 point) $P(\text{blue or red})$

- A. $\frac{5}{13}$ B. $\frac{5}{8}$ C. $\frac{6}{8}$ D. $\frac{6}{13}$

_____ 38. (1 point) One yellow marble and two red marbles are removed from the jar. Find $P(\text{next marble removed is yellow})$.

- A. $\frac{4}{13}$ B. $\frac{3}{13}$ C. $\frac{3}{10}$ D. $\frac{2}{5}$

You roll a 6-sided number cube. Find the probability of the given outcome.

_____ 39. (1 point) $P(6)$

- A. 0 B. $\frac{1}{2}$ C. $\frac{1}{6}$ D. 1

_____ 40. (1 point) $P(\text{greater than 1})$

- A. $\frac{5}{6}$ B. 0 C. 1 D. $\frac{1}{2}$

_____ 41. (1 point) $P(7)$

- A. $\frac{1}{6}$ B. 0 C. 1 D. $\frac{1}{2}$

Name: _____

ID: A

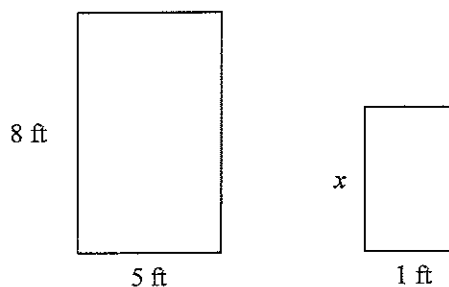
What is the solution of the equation?

- _____ 42. (1 point) $2x - 8 = 4x - 2$
A. -2 B. -4 C. -3 D. 1

43. (1 point) $30 - 3t = 3t$

In the diagram, the figures are similar. What is x ?

- _____ 44. (1 point)



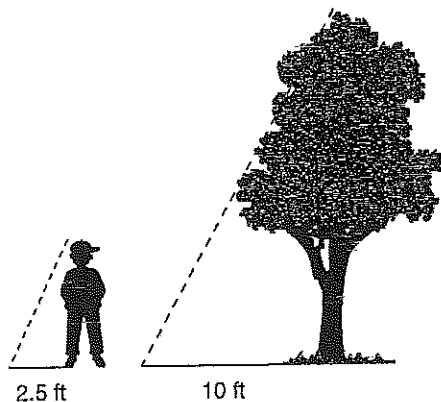
Drawing not to scale

- A. 1.6 ft B. 0.1 ft C. 5 ft D. 0.6 ft

Name: _____

ID: A

45. (1 point) A tree casts a shadow 10 ft long. A boy standing next to the tree casts a shadow 2.5 ft long. The triangle shown for the tree and its shadow is similar to the triangle shown for the boy and his shadow. If the boy is 5 ft tall, how tall is the tree?

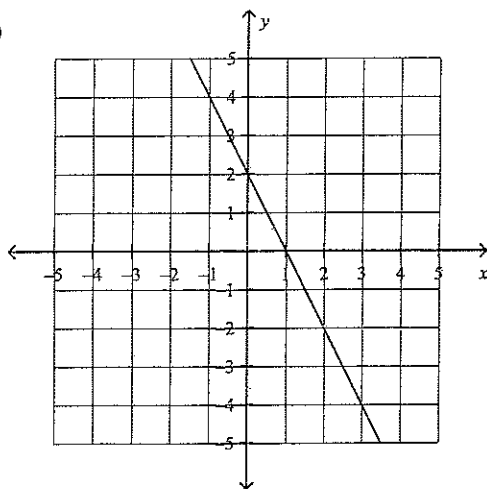


Drawing not to scale

46. (1 point) A dress that normally costs \$120.00 is on sale for 30% off. What is the sale price of the dress?
- A. \$90.00 C. \$84.00
B. \$4.00 D. \$36.00

Find the slope of the line.

47. (1 point)



What is the slope of the line that passes through the pair of points?

_____ 48. (1 point) (4, 7), (8, 2)

A. $-\frac{5}{4}$

B. $\frac{5}{4}$

C. $-\frac{4}{5}$

D. $\frac{4}{5}$

Write an equation of a line with the given slope and y-intercept.

_____ 49. (1 point) $m = -2$, $b = 3$

A. $y = 3x - 2$

B. $y = -2x - 3$

C. $y = 2x + 3$

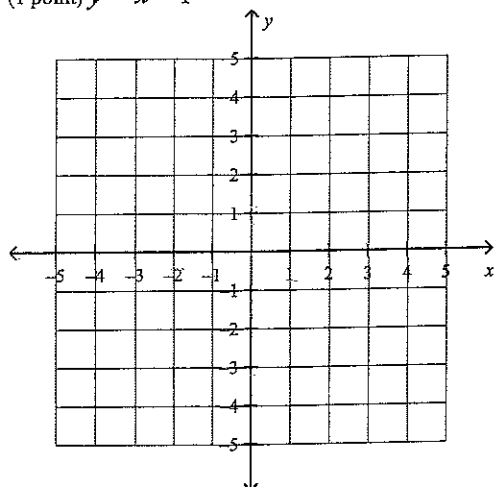
D. $y = -2x + 3$

Name: _____

ID: A

Graph the equation.

50. (1 point) $y = x - 1$



Write an equation in point-slope form for the line through the given point with the given slope.

51. (1 point) $(-10, -10); m = 4$

Write an equation for the line that is parallel to the given line and passes through the given point.

52. (1 point) $y = 4x - 10; (-2, -23)$

Name: _____

ID: A

Tell whether the lines for each pair of equations are *parallel*, *perpendicular*, or *neither*.

_____ 53. (1 point) $y = -\frac{1}{3}x - 9$

$24x - 8y = -24$

A. parallel

B. perpendicular

C. neither

_____ 54. (1 point) Find the distance between points $P(7, 2)$ and $Q(5, 6)$ to the nearest tenth.

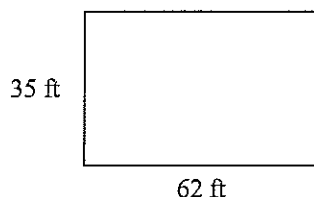
A. 14.4

B. 4.5

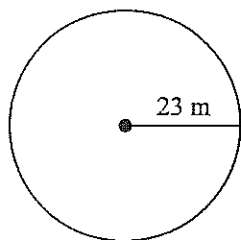
C. 20

D. 6

55. (1 point) Find the perimeter of the rectangle. The drawing is not to scale.



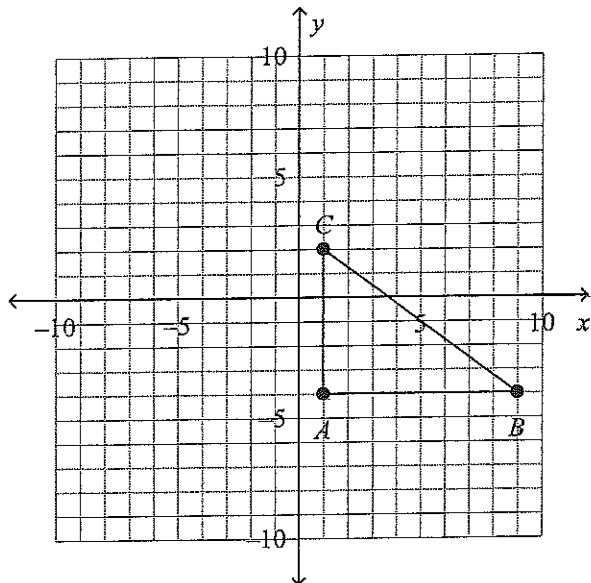
56. (1 point) Find the circumference of the circle to the nearest tenth. Use 3.14 for π .



Name: _____

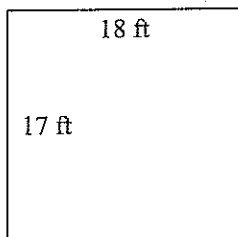
ID: A

57. (1 point) Find the perimeter of $\triangle ABC$ with vertices $A(1, -4)$, $B(9, -4)$, and $C(1, 2)$.

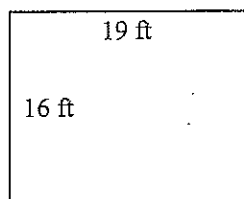


58. (1 point) Jennifer has 70 feet of fencing to make a rectangular vegetable garden. Which dimensions will give Jennifer the garden with greatest area? The diagrams are not to scale.

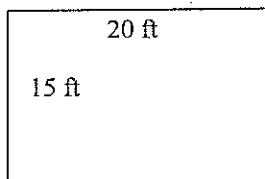
A.



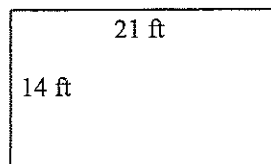
C.



B.



D.



Name: _____

ID: A

59. (1 point) If the perimeter of a square is 88 inches, what is its area?

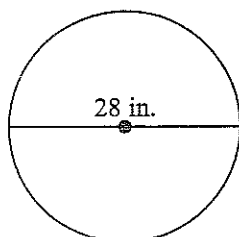
A. 22 in.^2

B. 88 in.^2

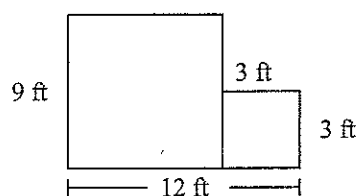
C. 484 in.^2

D. $7,744 \text{ in.}^2$

60. (1 point) Find the area of the circle in terms of π .

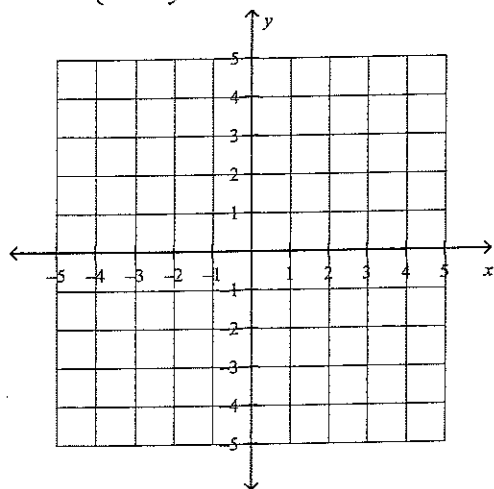


61. (1 point) The figure is formed from rectangles. Find the total area. The diagram is not to scale.



Solve the system by graphing.

62. (1 point)
$$\begin{cases} -3x - 2y = -7 \\ 3x - y = 10 \end{cases}$$



Solve the system by substitution.

63. (1 point)
$$\begin{cases} -2x - y = -14 \\ 3x - y = 11 \end{cases}$$

Solve the system using elimination.

64. (1 point)
$$\begin{cases} -4x + 4y = -8 \\ x - 4y = -7 \end{cases}$$